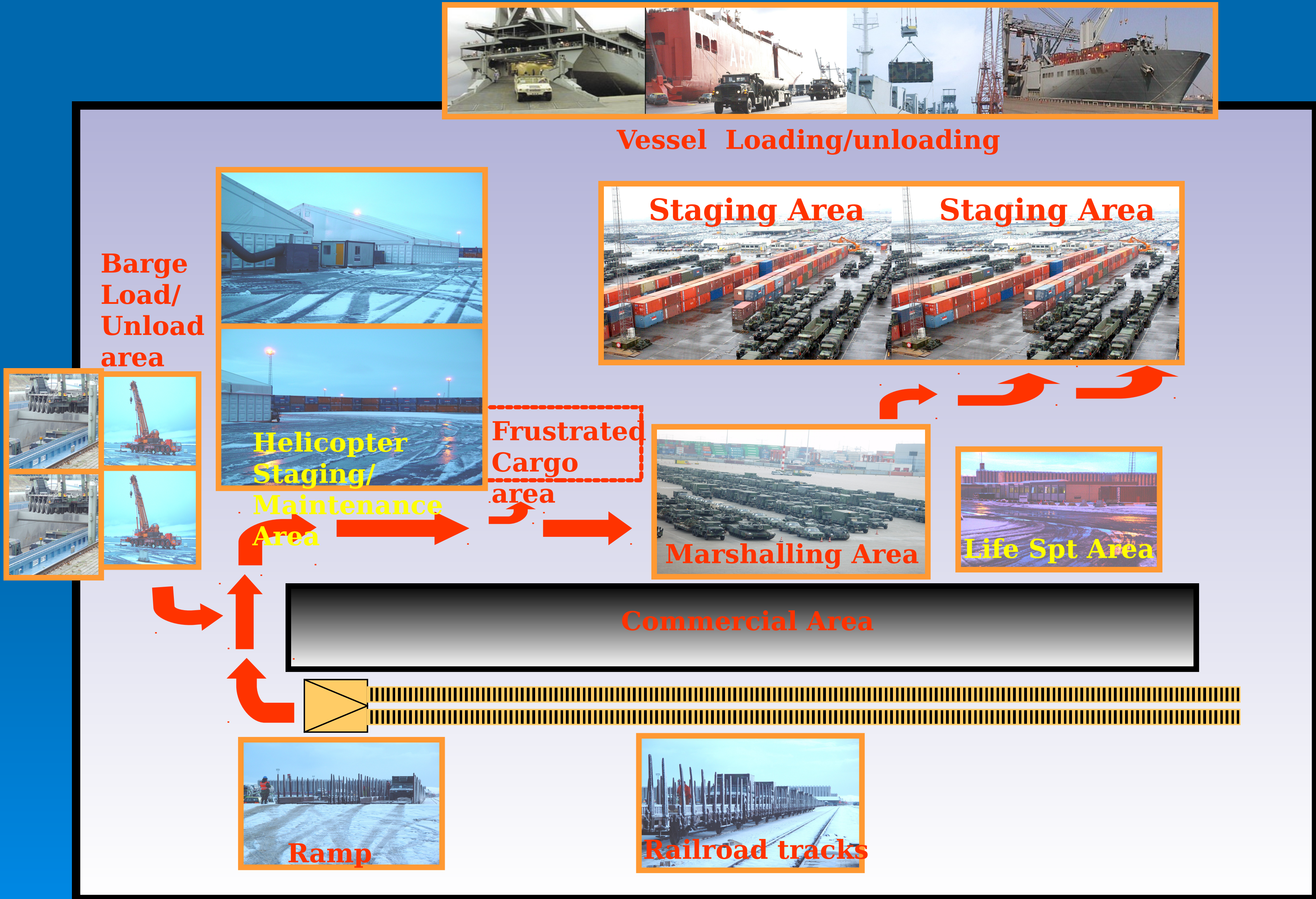
Port Operations

What type of facilities are normally at a port?

- Dock area with cranes
- Marshalling area
- Staging area
- Frustrated cargo area
- Maintenance support area/wrecker parking
- Helicopter storage area with maintenance facility and landing/take off area
- Railroad track(s) with ramp(s)
- Life Support Area

Antwerpen quay 1241 layout sketch



Vessel Loading/unloading

Staging Area

Staging Area

Barge Load/ Unload area

Helicopter Staging/ Maintenance Area

Frustrated Cargo area

Marshalling Area

Life Spt Area

Commercial Area

Ramp

Railroad tracks

Dock Area with Cranes

- Dock areas can be found in different conditions that ranged from damaged asphalt or concrete with potholes to perfectly leveled asphalt or concrete surfaces hooked up to POL separators.

- Different types of cranes may require special measurements during loading

ome

- Depending on the existing conditions the mission accomplishment may be impaired in certain ways (i.e. increased slipping/tripping hazards caused by gravel, potholes, snow and ice).

Marshalling/Staging Areas

- Staging areas can be found in different conditions that ranged from damaged asphalt or concrete with potholes to perfectly leveled asphalt or concrete surfaces hooked up to POL separators.

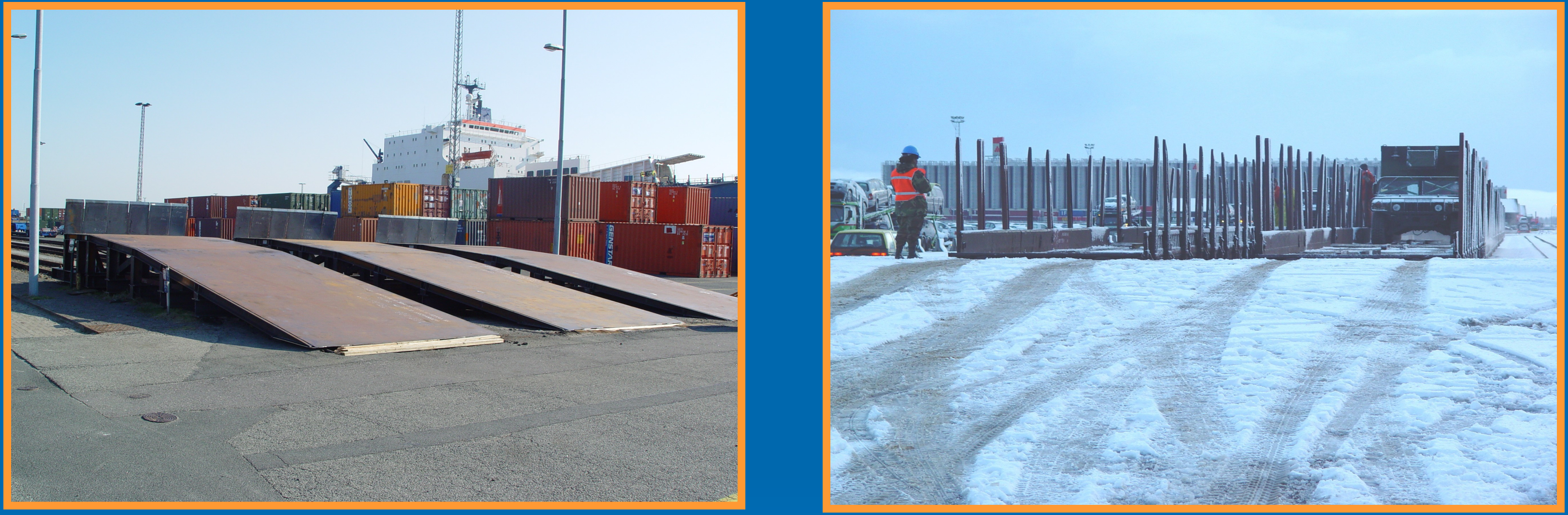
- Depending on the existing conditions the mission accomplishment may be impaired in certain ways (i.e. increased slipping/tripping hazards caused by gravel, potholes, snow and ice).

- These factors must be considered in the risk assessment prior to mission execution.

- Vehicles/equipment parked in staging areas must be properly secured

Loading Ramps

- Loading ramps can be found found in different conditions and types that ranged from temporary metal ramps to perfectly leveled ramps with concrete



- Special consideration should be given to loading ramps equipped with overhead power lines. A close coordination with the Host Nation railway officials through the local Movement Control Team is mandatory to ensure that the overhead power lines have been shut off and grounded in the

Life Support Facilities

- Life support facilities/services (warm up tents with food/beverages, latrines, medical support) play a vital role in a successful mission accomplishment during operations performed in cold/inclement weather conditions. All active sites must comply with the required standards and provide the above

Port Area Lighting

- **Night operations and inclement weather conditions increase the risk of accidents and injuries due to limited visibility. All active sites must have adequate lighting provided to enable the units to perform safe night operations the lighting consists mainly of fixed floodlights and can be lig s.**

PRE-OPERATIONAL REQUIREMENTS

Commander
Transportation Officer
All Personnel
Vehicle Operators

Port Operations

Prior to Port operations, commanders will:

- **Ensure personnel conduct risk assessments of the port, railhead s and staging areas considering common risk factors.**
- **Establish a port operation SOP.**
- **Appoint a port safety officer and safety NCO. The numbers of Safety NCOs will be based on the risk at the port.**
- **Ensure soldiers are briefed and instructed on the safety standards and procedures in AE Pam 385-15-3, 385-15-2, 385-15-1.**
- **Ensure safety equipment (i.e., reflective vests, hard-hats, flashlights), supervisory personnel and ground guides are available.**
- **Ensure medical support is available at loading and unloading sites.**
- **Ensure safety personnel be present during port operations.**
- **Ensure that non or weak swimmers are identified and coordinate with Military Traffic Management Command (MTMC) to ensure safety rings and lines are pre-positioned at key hazard points on**

Port Operations

The Port SOP must include at least the following:

- Uniform requirements.
- Protective closing and equipment (i.e. hardhats, reflective vests/belts etc.)
- Smoking policy.
- Pre-Accident Plan.
- Speed limits.
- Use of ground guides.
- Personnel accountability.

Port Operations

The transportation officer or representative will :

- **Coordinate with Military Traffic Management Command (MTMC) for load plans and vessel arrival.**
- **Keep units informed of changing conditions.**
- **Enforce the rules of conduct for ensuring safe operations.**
- **Make soldiers aware of warning signs posted in the local work area and affixed to equipment.**

Port Operations

- Wear Kevlar helmets or industrial hard-hats.

All personnel will:

- Be equipped with reflective vests and flashlights during darkness.

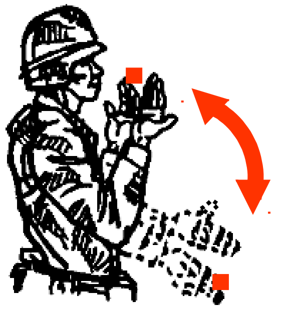
Vehicle operators will:

- d to operate the assigned vehicles.

- Be familiar with hand and arm signals outlined in FM 21-60.

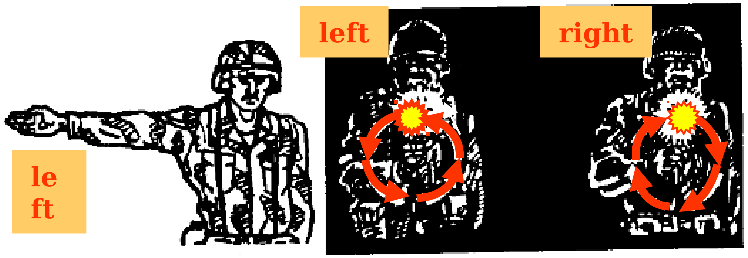
- Remove whip antennas from vehicles before entering a vessel. Antennas will not be remounted until vehicles are in the staging area after offloading and away from electric

Hand and Arm Signals (FM 21-60)



Move the hands and forearms backward and forward, palms toward the chest.

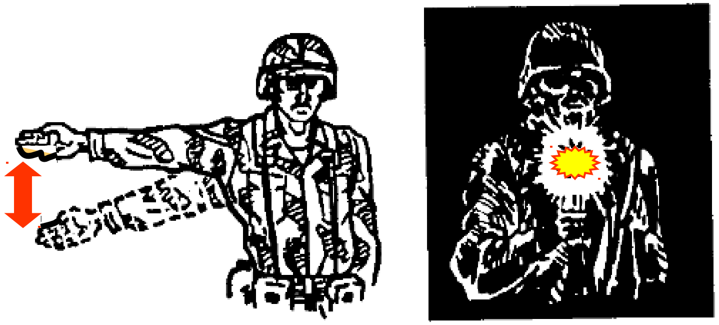
MOVE FORWARD



DAY
Extend the arm horizontally to side,

NIGHT
Rotate a light to describe a circle 12 to 18 inches in diameter in the direction of the turn.

RIGHT or LEFT TURN

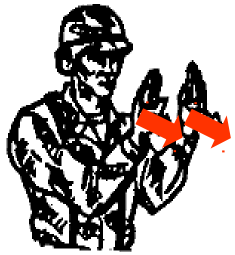


DAY
Extend the arm horizontally sideward, palm to the front; wave the arm slightly downward several times, keeping the arm straight. Do not move arm above horizontal.

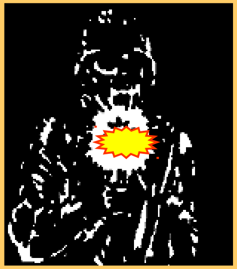
NIGHT
Hold a light at shoulder level; blink it several times toward the vehicle.

SLOW DOWN

Hand and Arm Signals (FM 21-60)

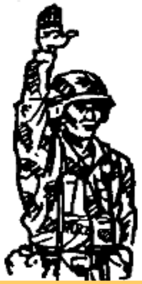


DAY
Face the vehicle(s) being signalized, raise the hands to shoulder level, palms to the front. Move the hands forward and backward

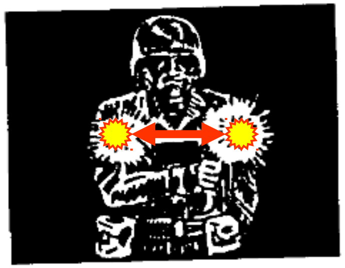


NIGHT
Hold a light at shoulder level; blink it several times

MOVE IN REVERSE (for stationary vehicles)



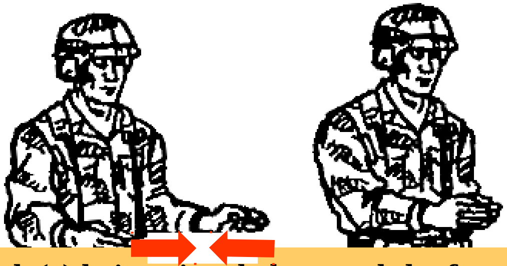
DAY
Raise the hand upward to the full extent of the arm, palm to the front. Hold that position until



NIGHT
Move a light horizontally back and forth several times across the path of approaching traffic to stop vehicles. Use the

o stop

HALT or STOP

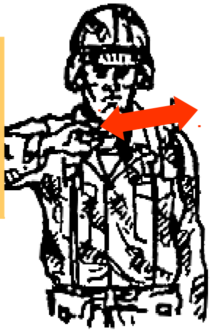


Face the vehicle(s) being signaled, extend the forearms to the front, palms inward and separated (width of the shoulders). Bring the palms together as the vehicle(s) approaches. The vehicle(s) must stop when the palms come together.

CLOSE DISTANCE BETWEEN VEHICLES AND STOP

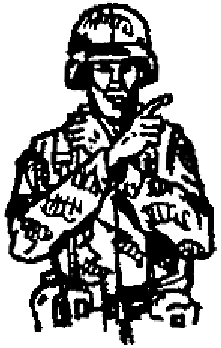
Hand and Arm Signals (FM 21-60)

Extend the arm parallel to ground, hand open, and move the arm across the body, in a throat-cutting action.

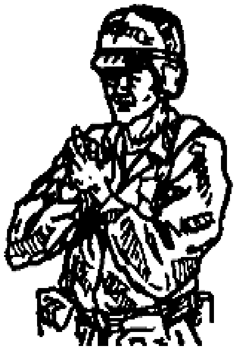


STOP ENGINES

Cross the wrists at the throat; point the index finger in direction of steer, Make a fist of the other hand.



NEUTRAL STEER (track vehicles)



Clasp the hands together, palms facing, at the chin level.

STOP (alternate signal to stop track vehicle)

Port Operations

Operations in adverse weather conditions:

- Provide adequate amount of drinking water, shaded or warm-up areas and brief personnel on proper work/rest cycles.
- Ensure personnel dress appropriate for weather conditions.
- Pre-designate/brief personnel on inclement weather procedures and determine high wind categories (> 40 knots).

15 knots = reevaluate risk level for crane loading
> 15 knots = stop sling loading operations
> 40 knots = stop entire operation

- Obtain and brief weather forecast daily.
- Cease operations and evacuate areas during

Port Operations

Operations in adverse weather conditions

Port Operations

Medical Support:

- Ensure that on site medical/crash rescue and local hospital support is available during the entire operation.
- Ensure MEDEVAC support is available.
- Position Combat Life Savers at key areas during operations.

Ship berthing:

- Ensure only authorized personnel have access to dock area during berthing operations and stay outside the danger zone (approx. length of ship rope).
- Enforce usage of protective headgear.

Port Operations

Portakabin

Medical Support

Ship Berthing

Port Operations

Diving operations - checking for explosive devices:

- Ensure all diving operations are coordinated with the ship’s captain.
- Ensure divers are briefed on hazardous areas.
- Ensure a rescue/medical team is available in case of an accident.

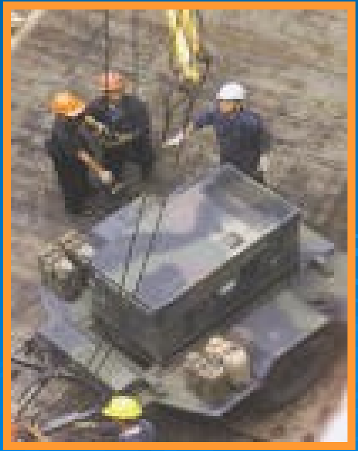
Working on ship and dock area:

- Ensure life saving equipment is available at key positions on dock.
- Identify non-swimmers prior to the operation.
- Enforce usage of protective headgear.
- Brief personnel on hazards associated with Material Handli Equipment (i.e. forklifts, retches, mobile cranes).

Port Operations

Diving operations - checking for explosive devices

Working on ship and dock area



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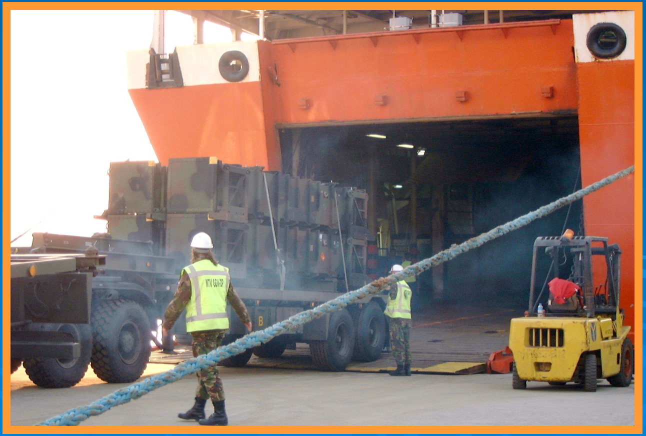
Port Operations

Working inside the ship and on the ship ramp:

- **Brief personnel on the following hazards:**
  - **Slips, trips, falls**
  - **Falling objects**
  - **Congested areas**
  - **Carbon monoxide poisoning**
  - **Limited visibility**
  - **High noise levels**
- **Ensure hardhats, reflective vests/belts and hearing protection are used.**
- **Ensure personnel handle tools properly and carefully.**
- **Tolerate no horseplay.**
- **Ensure ventilation systems are working during vehicle operations.**
- **Rotate personnel to limit exposure to carbon monoxide and high noise levels.**
- **Ensure drivers and ground guides are both familiar with hand signals.**

Port Operations

Working inside the ship and on the ship ramp



Port Operations

Driving AMVs inside and off the ship:

- Ensure all drivers are licensed/trained to operate their assigned military vehicles.
- Ensure “Supercargoes” are available to operate special equipment if needed (i.e. compactors, tracked vehicles, etc).

Driving from the ship to and inside the staging area:

- Enforce speed limit.
- Ensure AMVs are ground guided in the staging/freight forward area and in all congested areas.

Movement of non-operational vehicles:

- Provide NATO/U.S. slave cables and power source to start vehicles.
- Provide a wrecker to move non-operational vehicle (s) to the designated frustrated cargo area.
- Ensure tow bars are properly hooked up to towing points and safety chains/pins are installed.

Port Operations

Driving AMVs inside and off the ship

Port Operations

- Ensure guide rope handlers are briefed on guide rope use and wear

Sling loading operations:

- Ensure rope handlers hold rope tightly and that excess guide rope doesn't tangle around foot/leg.
- Ensure workers do not wrap guide rope around hand/arm.
- Ensure guide rope handlers release immediately if equipment starts spinning around.
- Select personnel to verify proper sling load hook up if ship personnel or stevedores are unfamiliar with proper procedures.
- Regardless of wind speed, all equipment moved by RAGLUND style cranes (hook can rotate) will have guide ropes attached.
- Establish clear zone under and around lifted items (25-ft impact circle).
- Ensure handlers leave impact area immediately in case of

Port Operations

Sling loading operations

Port Operations

Material Handling Equipment operations:

- Maintain clear zone around MHE and under the container while being moved/lifted.
- Establish warning sign/sound and brief personnel on correct usage.
- Ensure that all work stops immediately if ANYONE releases a warning sign/sound.
- Establish operational rule that no one approaches MILVAN until it is below eye level.

Port Operations

Material Handling Equipment operations

SMV
ENSTAR
tex

Port Operations

Conduct fueling/de-fueling operations:

- Provide comprehensive training and monitoring of refuel operations.
- Ensure only trained personnel refuel/de-fuel aircraft, following the established procedures.
- Ensure adequate fire fighting equipment/personnel is available during refueling/de-fueling operations.
- Develop a written Spill Plan.
- Provide sufficient spill kits at the port to contain/clean HAZMAT based on incremental spill sizes (50, 100, 200, or larger gallons)

Port Operations

Conduct fueling/de-fueling operations

FIRST RESPONSE SPILL KIT
DANGER

Spill kit

Port Operations

Towing of aircraft:

- when towing aircraft down the ramp, off the ship or from the dock to the maintenance area.
- Ensure the proper ground handling equipment (i.e. tow bars) is used.
- Mark all uneven ground surfaces that pose a hazard to towing aircraft.
- Have sufficient materials available to build clearance platform for antennas, gun barrels, etc.

Remove shrink wrap:

- Brief personnel on proper procedures to prevent injuries/ aircraft damage.
- Ensure personnel use safety cutters.

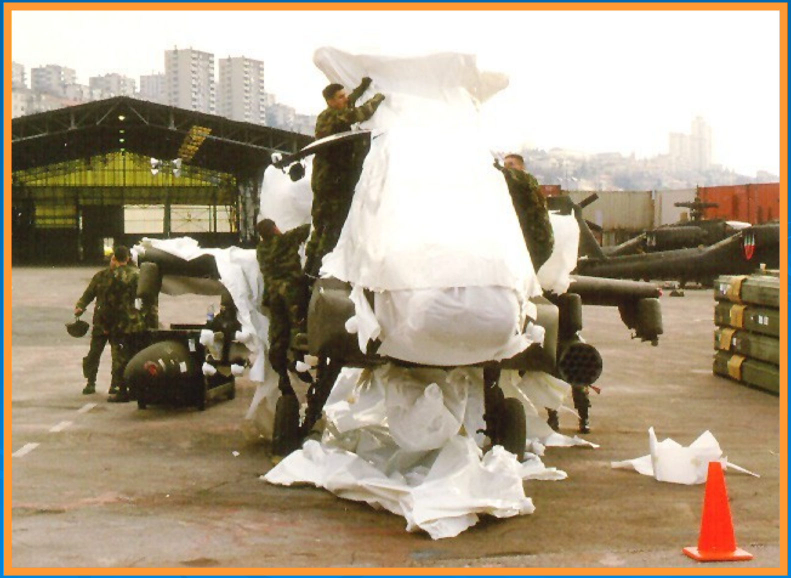
Port Operations

Towing of aircraft

Port Operations

NO STEP
NO PUSH

Remove shrink wrap



Port Operations

Conducting aircraft maintenance and test run:

- Ensure personnel are briefed to maintain three points
  contact on aircraft and use platforms/ladders.
- Brief personnel on risks and hazards of installing or removing
  parts.
- Ensure all personnel wear Personnel Protective Equipment.
- Ensure Foreign Object Damage (FOD) prevention is in place.
- Perform tool accountability daily.
- Conduct constant situational awareness.
- Ensure personnel working near aircraft departure/run up
  area wear goggles.
- Sweep ramp prior to operations and perform daily

Port Operations

Conducting aircraft maintenance and test run

Port Operations

At this time the vehicles, equipment and containers are located at the staging/freight forward area awaiting further transportation by:

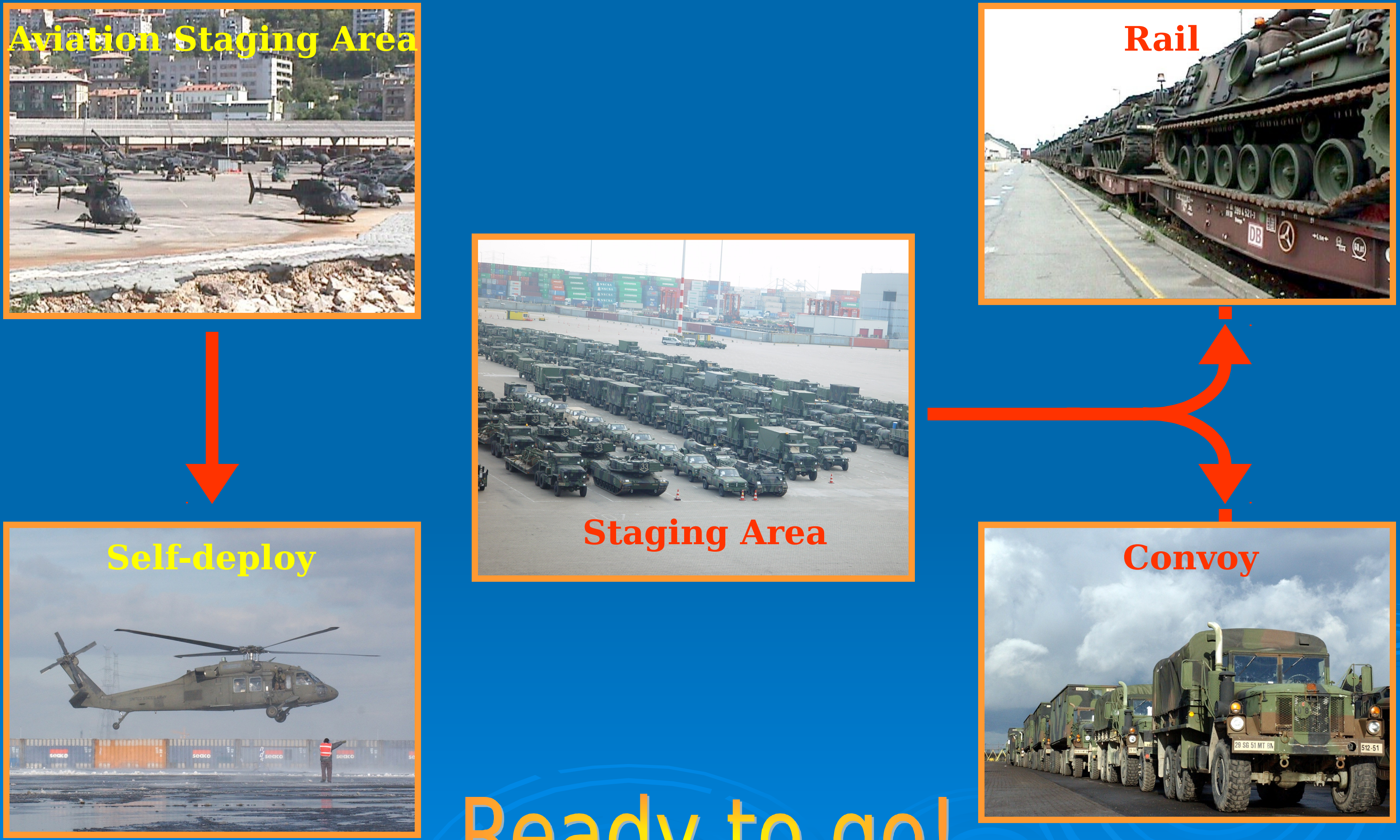
Rail

or

Convoy

The helicopter are located in the parking area ready to self- deploy.

Port Operations


Aviation Staging Area
Self-deploy
Staging Area
Rail
Convoy

Ready to go!

Port Operations

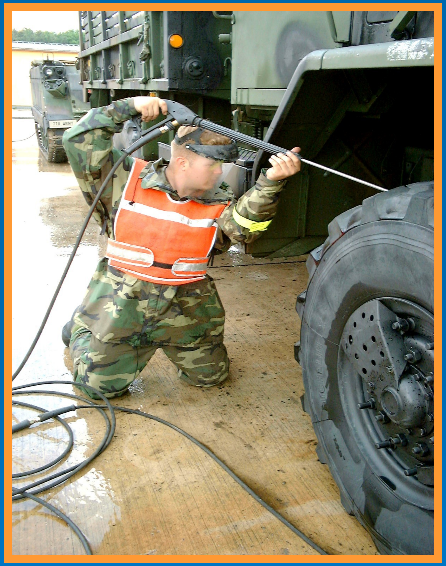
Re-deployment - Specific Issues

Shipment to CONUS - Customs inspection/cleaning:

- Brief personnel on hazards of operating high pressure wash/steam cleaning equipment.
- Ensure all personnel wear proper PPE (i.e. eye/face protection, gloves, wet weather gear).
- Ensure that only one cleaner should be used per vehicle, MILVAN or equipment to reduce the injury risk.
- Ensure drive on ramps/steel racks are used to elevate vehicles/MILVANs for inspection and bottom cleaning.
- Ensure platforms are used for helicopter cleaning when required.

Port Operations

Shipment to CONUS - Customs inspection/cleaning:



Port Operations

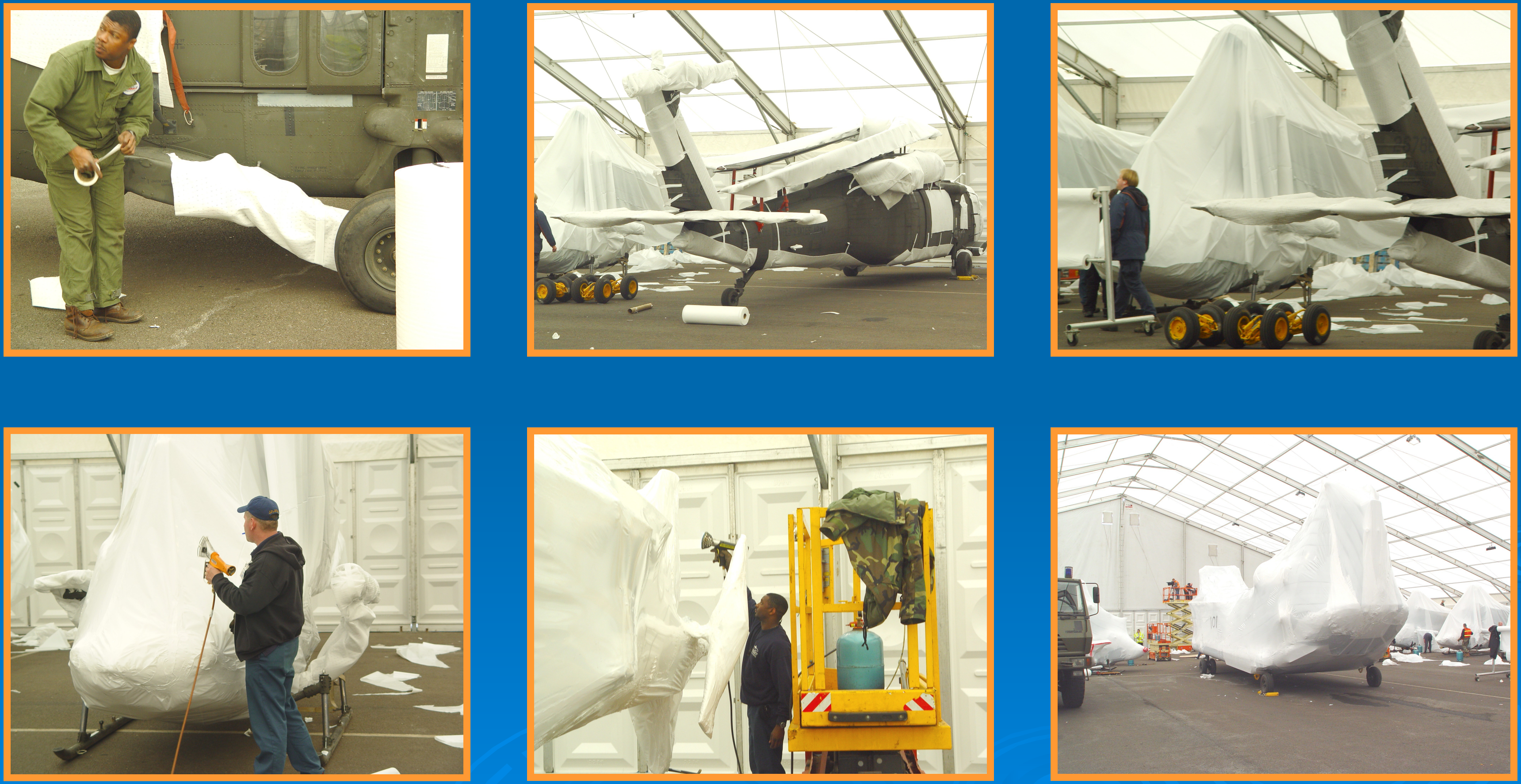
Re-deployment - Specific Issues

Shrink wrap operations on helicopters:

- f installing shrink-wrap coverage (i.e. tripping hazard, cuts, thermal burns).
- Ensure all personnel wear proper PPE (i.e. leather gloves) and use proper tools.
- Ensure there is no visible fuel spillage or leaks prior to operating propane open flame shrink nozzle.
- Ensure personnel handle open flame propane torch safely to avoid burning injuries.

Port Operations

Shrink wrap operations on helicopters



Port Operations

Re-deployment - Specific Issues

Disinfection of material (if applicable):

- Brief personnel on hazards of operating with disinfectants.
- Ensure that only one trained/licensed personnel apply disinfectant.
- Ensure all personnel wear proper PPE:

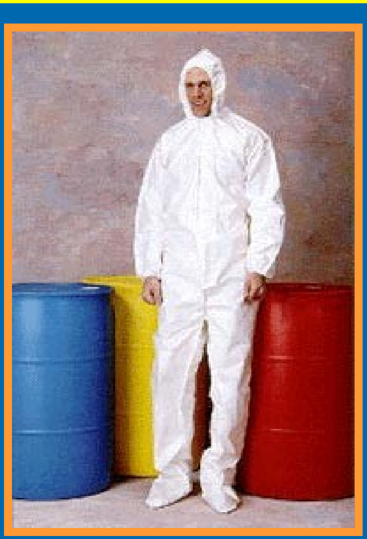
Respiratory/eye protection:
Full-face respirator with organic vapor (Venno Vet 1 and acetic acid)
or acid gas (sodium hypo chlorite) cartridges and mist prefilters (P95).

Hand protection:
Rubber gloves (NBC), butyl rubber or nitrile are recommended.

Body protection:
Wet weather parka (rubber/PU), not GoreTex, with hood and over
pants Hooded Saranex® coveralls recommended

Port Operations

Disinfection of material (Protective Clothing and Equipment)



Body protection

Respiratory/eye protection

Foot protection

Hand protection

Port Operations

Mission succesfully completed!

The ship ramp is up.

Leaving the port.

Questions?

Comments?